Meta-analysis: Any blood pressure reading above normal may increase risk of stroke

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Anyone with blood pressure that's higher than the optimal 120/80 mmHg may be more likely to have a stroke, according to a new meta-analysis published in the March 12, 2014, online issue of *Neurology*, the medical journal of the American Academy of Neurology.

The meta-analysis looked at all of the available research on the risk of developing stroke in people with "prehypertension," or blood pressure higher than optimal but lower than the threshold to be diagnosed with high blood pressure, which is 140/90 mmHg. A total of 19 prospective cohort studies with more than 760,000 participants were included in the analysis, and participants were followed for time periods ranging from four to 36 years. From 25 to 54 percent of study participants had pre-high blood pressure.

The analysis found that people with pre-high blood pressure were 66 percent more likely to develop a stroke than people who had normal blood pressure. The results were the same after researchers adjusted for other factors that could increase the risk of stroke, such as high cholesterol, diabetes and smoking. The researchers determined that nearly 20 percent of strokes in the study population were due to pre-high blood pressure.

The analysis also divided people with prehypertension into high and low groups, with blood pressure over 130/85 in the high range. Those in the high range had a greater risk of stroke than those in the low range. Those in the high range were 95 percent more likely to develop a stroke than

those with normal blood pressure, while those in the low range were 44 percent more likely.

"These findings, if confirmed, have important takeaways for the public," said study author Dingli Xu, MD, of Southern Medical University in Guangzhou, China. "Considering the high proportion of the population who have higher than normal blood pressure, successful treatment of this condition could prevent many strokes and make a major difference in public health."

Blood pressure medication is not currently recommended for people with pre-high blood pressure, Xu said, in part because not enough research has been done on its safety and effectiveness for pre-high blood pressure.

"Prehypertension should be managed with changes in diet and exercise to help reduce the risk of stroke," Xu said. "More research should be done on using blood pressure drugs for people with prehypertension."

Provided by American Academy of Neurology

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